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ABSTRACT

In light of inconsistent research findings, a study examined the relationship of traitlike public speaking apprehension to the competence of public speakers, as well as the mediating role of gender in that relationship. Subjects, 105 students from a variety of majors and enrolled in 7 sections of a public speaking fundamentals course at a southern university, completed the Personal Report of Public Speaking Apprehension, while their subsequent speech grades served as a measure of competence. Results confirmed that, as expected, traitlike public speaking apprehension was negatively related to public speaking competence, although no interactive effect was found between gender and public speaking apprehension. In addition, results were suggestive of a nonlinear component to the apprehension-competence relationship. (Contains 41 references and 2 tables of data.) (Author/RS)

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Public Speaking Apprehension and Gender as Predictors of Speech Competence

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Abstract

In light of inconsistent research findings, this study examined the relationship of traitlike public speaking apprehension to the competence of public speakers, as well as the mediating role of gender in that relationship. Early in the study, speech students completed the Personal Report of Public Speaking Apprehension, while their subsequent speech grades served as a measure of competence. Results confirmed that, as expected, traitlike public speaking apprehension was negatively related to public speaking competence, although no interactive effect was found between gender and public speaking apprehension. In addition, results were suggestive of a nonlinear component to the apprehension-competence relationship.

Public Speaking Apprehension and Gender as Predictors of Speech Competence

Theorists have researched communication apprehension (CA) as much as any other concept. This research has shown that the behavioral consequences of CA occur mostly in non-public speaking situations (Daly & McCroskey, 1984). For example, interpersonal communicators with high CA use more disfluent rhetorical interrogatives (like "you see?"), talk less, and nod their heads less (Ayres, 1989; Powers, 1977). Linguistically, they differ from those with low CA in type-token ratio, syllables per word, and phrase repetitions (Jordan & Powers, 1978). They interact less on the college campus and report less self-disclosure (McCroskey & Richmond, 1977; McCroskey & Sheahan, 1978). In small groups, CA has predicted verbosity (Sorensen & McCroskey, 1977); seating choice (McCroskey, 1976); and competence measured by perceived influence, credibility, and number of problem solving ideas (Arnston, Mortenson, & Lustig, 1980; Jablin, Seibold, & Sorenson, 1977; McCroskey, 1977).

Although higher CA produces less positive behavior, some literature has been intriguingly inconsistent. Ayres (1989) reported that high CA subjects talked <u>less</u> disfluently in dyads and Jordan and Powers (1978) concluded that in more formal, stressful interpersonal settings it is "difficult to distinguish high apprehensives from low apprehensives in terms of verbal behavior" (p. 299).

Although fewer studies have explored the relationship between CA and public speaking competence, they have obtained similar results. The purpose of this study, therefore, is to clarify the relationship between traitlike CA and public speaking competence.

Review of Relevant Literature

General Findings

Speakers who report higher CA exhibit specific behaviors. Gilkinson (1943) found that those who indicated more fear on the Personal Report of Confidence as a Speaker (PRCS) were rated lower by teachers on voice pitch and force. According to Lerea (1956), speakers with severe rather than slight speech anxiety had lower verbal output, smaller type-token ratios, and more non-fluencies and errors. Mulac and Sherman (1975) found a negative relationship between "subjective speech anxiety" (measured by Gilkinson's PRCS) and objectively rated "speech skill." Freimuth (1976) reported a positive relationship between students' speech anxiety and the number of silences perceived by other students.

More recently, Powers and Smythe (1980), using the Personal Report of Communication Apprehension (PRCA) to measure apprehension and four speech grades in a fundamentals course to measure speech skill, found that those with "low" CA (compared to "moderate" and "high" groups) performed better on all speeches. In another study, Beatty, Forst, and Stewart (1986) showed that apprehension level (as measured by the public speaking component of the PRCA) was inversely related to speech length. Also, those with the highest public speaking apprehension were most likely to commit decision-

making errors in choosing speech introduction strategies (Beatty, 1988).

Research Inconsistencies and Problems

Some inconsistent findings, however, provoke questions about this general idea that higher CA results in poorer public speaking.

In a study by Gilkinson (1942), the quartile of speakers reporting the least fear on the PRCS were perceived as more listless and nervous than those with low to moderate fear. Earlier, Hunter (1935) differentiated very introverted from very extroverted students, finding that both groups performed poorly on public speaking tasks and even that more extroverts were inferior speakers.

Clevenger (1959) summarized experimental research on "stage fright," noticing that although "observed stage fright bears a strong negative relationship to judgments of speaking ability, experienced stage fright [as measured by such instruments as the PRCS] bears a weak negative relationship to judgments of speaking ability" (p. 141).

Another finding countering the general trend was that, among children and teachers in Detroit elementary schools, there was no relationship between speech anxiety and speech ability (Shaw, 1967).

Apparently, data about the impact of self-reported CA on public speaking skills have been incongruous. Why? Recent experiments indicate that an untapped nonlinear relationship between apprehension and competence might explain some of this

inconsistency. First, moderate apprehensives adhered to their chosen strategies for speech introductions more than low or high apprehensives (Beatty, 1988). Beatty also paraphrased Janis (1971) by saying that "when anxiety levels are too low the subject may not take seriously enough the situational demands and when anxiety is too high defensive behavior is produced" (p. 307). A second study (Behnke, Sawyer, & King, 1987), although employing a measure of state rather than trait anxiety, concluded that "the level of speaker anxiety is not very accurately detected by audiences," and offered the explanation that moderate speech anxiety does "not deteriorate speaking performances sufficiently to produce noticeable alterations in behavior" (pp. 139-140).

Gerald Phillips wrote, anecdotally, about anxiety and competence: "When a person wants to improve speaking skill, removing anxiety does nothing more than reduce the incentive to attain skill. A little healthy tension is important" (1980. p. 107). This thinking provides not only some rationale for proposing a nonlinear relationship between apprehension and speaking skill, but also its significance. As Phillips added, "When a person is not skilled, removal of anxiety produces a person willing to participate unskillfully. . . . Removal of anxiety is useful only when we can assume skill exists" (1980, p. 107).

The research has suggested, then, a negative relationship between self-reported CA and public speaking competence. It has, however, inconsistently hinted at the value of some apprehension. Therefore, the present study advanced the following hypothesis and

research question:

H1: Overall, traitlike public speaking apprehension will be negatively related to public speaking competence.

RQ: Is there a nonlinear component to the relationship between traitlike public speaking apprehension and public speaking competence?

The mediating role of gender might also contribute to inconsistent findings. Females experience more traitlike public speaking apprehension, but not overall CA, than males (Allen, Andriate, & Cusick, 1982; Allen, O'Mara, & Long, 1987; Brownell & Katula, 1982; Gilkinson, 1942; McCroskey, Simpson, & Richmond, 1982; McDowell, 1985). Yet females perform better at communication coursework and skills, including public speaking (Allen, O'Mara, & Long, 1987; Gray, Buerkel-Rothfuss, & Thomas, 1987; Mulac & Lundell, 1982; Pearson, 1982; Pearson & Nelson, 1981).

What could account for this discrepancy? Perhaps females handle public speaking apprehension differently than males. The possibility that females are better at coping with or at least disguising apprehension would explain findings like Clevenger's (1959) that "judges observe stage fright more in men than in women, while women experience more stage fright than men" (p. 145). Such a gender discrepancy suggests that the public speaking competence of highly apprehensive males might be lower than the public speaking competence of highly apprehensive females. As apprehension decreases, the difference in competence between males and females

should be reduced. Therefore, a second hypothesis was proposed:

H2: Gender will interact with public speaking apprehension on public speaking competence.

Method

Subjects

The 105 students who participated in this study, from a variety of majors, were enrolled in seven sections of a public speaking fundamentals course at a southern university. Both sexes were adequately represented in the sample (57% female, 43% male) and subjects' ages ranged from 17 to 49 (M=23.94, SD=7.51). A majority (70%) were between 17 and 24 years old. The sample included every undergraduate classification, though most subjects (40%) were sophomores. Three students dropped the course, leaving a total of 102 for data analysis.

Measurement

Public speaking apprehension. The Personal Report of Public Speaking Apprehension (PRPSA), developed by McCroskey (1970), was chosen to measure students' traitlike CA for two reasons. First, its 34 items focus exclusively on general (trait) apprehension about the public speaking context, unlike instruments used in several of the studies discussed previously (Behnke, et al., 1987; Freimuth, 1976; Powers & Smythe, 1980). This focus was appropriate since the dependent variable in the present study was public speaking competence. Second, internal reliability estimates for the PRPSA have been excellent, ranging from .91 (Neer & Kircher, 1989) to .94 (McCroskey, 1970). Also, test-retest reliability has

been strong, for example, .84 within ten days (McCroskey, 1970). Internal reliability (Cronbach's alpha) for the present study was .94. Scores on the PRPSA can range from 34, extremely low anxiety, to 170, extremely high anxiety.

Subjects completed the PRPSA before graded speeches had begun. Their scores ranged from 56 to 170 (M=112.05, SD=22.81).

Public speaking competence. To assess the dependent variable, three numerical speech grades were gathered from all six instructors at the semester's end for each of the students who completed the PRPSA. The average of these three grades represented an overall public speaking competence score for each student. Competence scores ranged from 70 to 95 (M=86.40, SD= 5.29).

These competence scores were computed using three speeches standard for fundamentals courses: informative, informative with visual aids, and persuasive. (For 30 students, the competence score was calculated using grades on the first two speeches only, because instructors were unable to provide persuasive speech grades for these students.)

Other researchers have used speech grades as a measure of competence (Pearson, 1982; Pearson & Nelson, 1981; Powers & Smythe, 1980), and teachers trained to judge speeches are expected to make sound judgments. Individual instructor biases were controlled for by using a variety of instructors, ranging from one graduate assistant to associate and full professors with over twenty years of experience teaching speech.

Finally, subjects were asked how long, in hours, they spent preparing each of their speeches.

Data Analysis

The Pearson product-moment correlation (Pearson's r) tested the strength and direction of the relationship between PRPSA scores and public speaking competence scores.

A 2 X 5 analysis of variance (gender by apprehension level) was used for three purposes: 1) to determine how level of apprehension influences competence; 2) to look for any nonlinearity in the apprehension-competence relationship; and 3) to test for the interactive effect between gender and apprehension as they influence competence.

For the ANOVA procedure only, PRPSA scores were grouped into five apprehension levels, with 19-21 subjects per group, including "very low" (scores 56-90), "low" (91-108), "moderate" (109-120), "high" (121-133), and "very high" (134-170).

Results

The first hypothesis, that traitlike public speaking apprehension would be negatively related to public speaking competence, was supported by the ANOVA results, but not by Pearson's r. The correlation between PRPSA scores and public speaking competence scores was -.13 (p=.09, one-tailed). With gender partialed out, this correlation was -.16 (p=.06, one-tailed). Since the range of competence scores was minimal (25) and their distribution was compact (81.37% of the cases fell between one SD below and above the mean), they were standardized by

conversion to z-scores and then correlated again with PRPSA scores. This technique produced the same results.

However, ANOVA produced a significant main effect relationship between PRPSA level and public speaking competence scores ($F[4,92]=2.604$, $p=.04$, $eta=.30$). As public speaking apprehension increased through the first four levels, public speaking competence decreased (see Table 1). Supplemental analysis using the

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Insert Table 1 about here

Student-Newman-Keuls' procedure (Bruning & Kintz, 1977) revealed that the difference in competence score means between apprehension levels 1 and 4 contributed significantly to ANOVA results ($p<.05$). In other words, those with "very low" public speaking apprehension were significantly more competent speakers than those with "high" apprehension.

Why, however, did the Pearson's r produce such a weak correlation (-.16 with 3% shared variance) between PRPSA scores and competence scores, while the ANOVA was significant and produced a stronger eta correlation ratio (.30)? Because the mean competence scores across all <u>five</u> apprehension levels suggest the presence of nonlinearity, the eta coefficient was likely a better estimate of the variance shared (9%) between the two variables (Smith, 1988).

The research question involved whether there would be a nonlinear component to the public speaking apprehension-competence relationship. The ANOVA results were suggestive of such

nonlinearity, but inconclusive. In addition, the location of the nonlinear component was unexpected, at the upper rather than lower levels of apprehension. Closely examining the competence score means in Table 1 shows that, as previously mentioned, competence decreased as public speaking apprehension increased through the first four levels, but then at level 5 competence increased again to a degree associated with lower apprehension levels. For now, this result must remain suggestive, because supplemental analysis (Student-Newman-Keuls') indicated that the competence increase from apprehension level 4 to level 5 was not statistically significant.

The second hypothesis, that gender would interact with public speaking apprehension to influence public speaking competence, was not supported. Although the mean competence score for females with "very high" apprehension was stronger than for males at

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Insert Table 2 about here

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the same apprehension level (see Table 2), the difference was not significant. Although females in this study, as expected, were significantly more apprehensive about public speaking ($F[1,95]=4.49$, $p=.04$), they performed as competently as males across all levels of apprehension.

Discussion

It remains unclear why females perform as competently at public speaking as males, despite higher apprehension. This study did not support the idea that they process varying amounts of

apprehension differently than males. Nor is it likely that females spend more time preparing speeches, because survey results showed no such difference. Several possible explanations can be offered.

First, Ns within the cells of the two factor ANOVA were disproportionate. Research correcting this problem is called for. Second, if it is true that there is a competence value of very high apprehension, females might "benefit" overall in that they are more likely to be highly apprehensive. In other words, females might perform well at public speaking partly because of, rather than despite, high apprehension. Third, females' superior nonverbal encoding ability (Knapp, 1980) might help them not only to hide apprehension when speaking, but also to enhance speaking competence in other ways. Fourth, teachers might have different expectations for male and female public speaking students, influencing their judgments of competence. Last, since females self-disclose more than males (Arliss, 1991; Stewart, Stewart, Friedley, & Cooper, 1990), perhaps the actual gender discrepancy in public speaking apprehension is less than the reported discrepancy (using self-report measures like the PRPSA). (This explanation appears unlikely, however, since self-report scales that measure general CA--like the PRCA--have generally shown no gender discrepancies.) More research should clarify which one or which combination of these explanations is best.

This study did show that, despite the inconsistent findings discussed earlier, there seems to be a negative relationship overall between traitlike public speaking apprehension and public

speaking competence. As public speakers' apprehension increases, their competence generally decreases. This study more tentatively suggested a surprising nonlinear component to that relationship, that public speakers with very high apprehension might perform more competently than those with more moderate apprehension.

If this prospect is validated by future research, what might account for it? Perhaps an incentive to improved performance requires higher apprehension levels than we previously thought. As public speakers' fear increases, their competence decreases apparently because fear deteriorates their ability to prepare and perform without increasing enough their incentive to do better, except for speakers with much higher anxiety, for whom incentive begins to balance skills deterioration.

Such a finding would not rule out the possibility that extremely low apprehension might lead to decreased competence, as originally speculated. In fact, perhaps that possibility did not materialize in the present study because apprehension levels were not finely "carved" enough; that is, since the study failed to tap the very lowest levels of apprehension it could not assess their impacts.

What are this study's implications? First, since it is clearer that increased traitlike fear of public speaking is generally associated with decreased public speaking competence, speech teachers need to intensify their focus on methods for reducing trait (and not just state) anxiety in their students, methods such as cognitive restructuring, routine relaxation

exercises, visualization, and systematic desensitization. It is no longer good enough for teachers to think of public speaking apprehension as something that "goes with the territory." Second, there is a compelling need for more research on possible nonlinearity in the apprehension-competence relationship. Otherwise, we cannot be certain that reducing public speaking apprehension will necessarily improve public speaking competence.

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Table 1
Mean Public Speaking Competence Scores by Apprehension Level

Level 1 Very Low	Level 2 Low	Level 3 Moderate	Level 4 High	Level 5 Very High
88.60 (n=21 sd=5.05)	86.67 (n=21 sd=5.16)	86.09 (n=21 sd=5.50)	83.65 (n=19 sd=5.22)	86.75 (n=20 sd=4.78)

Table 2
Mean Public Speaking Competence Scores
by Gender and Apprehension Level

	Level 1 Very Low	Level 2 Low	Level 3 Moderate	Level 4 High	Level 5 Very High
Males	88.41 (n=11 sd=4.33)	85.40 (n=13 sd=5.79)	85.75 (n=8 sd=4.90)	83.56 (n=6 sd=3.44)	84.17 (n=5 sd=6.75)
Females	88.80 (n=10 sd=5.98)	88.73 (n=8 sd=3.27)	86.30 (n=13 sd=6.02)	83.69 (n=13 sd=5.99)	87.61 (n=15 sd=3.85)